US005570869A

United States Patent [19]

Diaz et al.

[11] Patent Number: 5,570,869

[45] Date of Patent: Nov. 5, 1996

[54] **SELF-CALIBRATING WATER FLUID CONTROL APPARATUS**

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[21] Appl. No.: **359,439**

[22] Filed: **Dec. 20, 1994**

[51] **Int. Cl.**[6] **E03D 5/10**

[52] **U.S. Cl.** **251/129.04**; 4/304; 4/623

[58] **Field of Search** ..... 251/129.04; 4/623, 4/304, DIG. 3; 250/221, 221.1, 205

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[57] **ABSTRACT**

A self-calibrating fluid flow control apparatus for use with a fluid flow source is provided. A detection area is defined wherein the interposition of an object therein causes a control device to activate the fluid flow source. A calibrating device is configured to continuously define, at a predetermined rate, a steady state boundary of the detection area, wherein the steady state boundary conforms to objects interposed within said detection area so that a new detection area is defined which is free of interposed objects capable of activating the fluid flow source. An object left indefinitely within the detection area will not, therefore, cause the control device to indefinitely activate the fluid flow source nor, after deactivation by a timing mechanism, prevent the fluid flow source's subsequent reactivation.

35 Claims, 4 Drawing Sheets